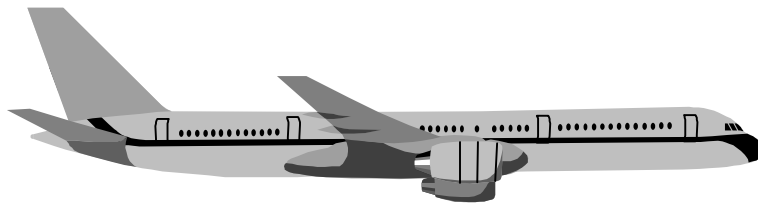


**OPEN SKIES
TREATY
*THE IMPACT***



**DEFENSE TREATY
INSPECTION READINESS
PROGRAM**

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INTRODUCTION

Your facility may be subject to an Open Skies overflight. The Open Skies Treaty will permit Treaty members to overfly the United States using aircraft equipped with a variety of specified sensors. *Any facility* in the U.S. can be imaged during those overflights, and sensor data collected during overflights can be given to any Treaty member. The combined effect of several sensors operating simultaneously may reveal information about your facility and its operations that is otherwise not available.

The U.S. Government, through its Defense Treaty Inspection Readiness Program (DTIRP), can advise you of impending overflights of your facility, if you so request. DTIRP can also provide additional information regarding the impact of an overflight on your facility, and actions you can take to reduce any adverse impact. This pamphlet provides a brief introduction to the Open Skies Treaty and its potential impact on U.S. facilities.

Open Skies Treaty



OBSERVATION FLIGHTS

About The Treaty

The Open Skies Treaty is an international agreement that permits Treaty members to fly observation missions over the territory of other members. These overflights were originally intended to improve the openness and transparency of the positioning of military forces, stockpiles, and other military activities; to facilitate the monitoring of arms control agreements; and to strengthen the capability for conflict prevention and crisis management.

Although such measures contribute to increasing confidence among Treaty members of the benign intent of other members, the use of Open Skies flights for military and economic intelligence collection cannot be overlooked. The U.S., Canada and twenty-five NATO and former Warsaw Pact states have signed the Treaty, and other states may apply to become a member.

Overflights

The U.S. is obligated to accept up to 31 overflights each year during the first three years of the Treaty, and 42 per year for the life of the Treaty, which is of unlimited duration. Any portion of U.S. territory may be overflowed.

Open Skies Treaty

The Open Skies Treaty limits the types and capabilities of sensors that may be used during an overflight. Permitted sensors include optical panoramic and framing cameras, video cameras with real-time display, infra-red line-scanning devices and synthetic aperture radar. Additional sensors, such as environmental sensors, could be added in the future.

Permitted Sensors

Each sensor has unique imaging capabilities. Four optical cameras may be installed on the aircraft. One camera may be used to take pictures directly below the observation aircraft and two other cameras may be used to take oblique pictures on either side of the aircraft. The vertical and oblique pictures can then be overlapped to provide a stereographic image of the photographed area. This process may reveal the height and side characteristics of objects on the ground. A fourth panoramic camera may also be used to take a series of pictures which will render a wide view of the photographed area.

The video cameras will provide a real-time display of the imaged area. Although the resolution of the video cameras is limited to 30cm, processing of the multiple video images can produce



much sharper images, bringing resolution down to extremely precise levels.

The Treaty also permits the use of infra-red line-scanning devices which are used primarily to detect relative temperature differences between imaged objects. Under the Treaty, infra-red devices may be used during the first three years only by mutual agreement, on a case-by-case basis, between the observed and the observing country. Thereafter, use of infra-red devices is unrestricted.

Finally, observation aircraft may be equipped with sideways-looking synthetic aperture radar (SAR). SAR is a radar that produces an image, regardless of weather or darkness, which is more like a picture than a radar image. Buildings will be recognizable, large and small aircraft can be detected, and the presence or absence of large numbers of vehicles in parking lots can be confirmed.

Sensor Resolution

An Open Skies sensor's ability to collect useful data depends upon the permitted ground resolution. For example, the permitted ground resolution for both optical and video cameras is 30 centimeters. The use of 30cm photographic imagery will permit the detection of groups of people engaged in

activities and the identification of industrial equipment and vehicles, as well as some modification to equipment or structures.

The ground resolution for the SAR used on Open Skies observation aircraft cannot be better than 3 meters. This resolution will allow recognition of the presence of very large equipment or buildings, but could not be used to identify individual pieces of equipment. The infra-red line-scanning devices are limited to 50cm resolution. This resolution can be used to detect heat from operating vehicles and industrial equipment, fuel status in storage tanks, and to identify aircraft and vehicles.

OVERFLIGHT IMPACT

Imagery collected during Open Skies observation missions will provide a significant amount of intelligence information that cannot be acquired by commercial satellite sensors. Open Skies overflights will primarily affect activities that occur outdoors such as research,

***Imagery
Collection***

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development, testing, evaluation or modification programs. Plant or facility layouts are readily observable including such items as new construction, power sources, ventilation systems, physical security arrangements, external storage areas, shipping containers, material handling equipment, parking lot and road capacity and use, cooling ponds, thermal pollution of waterways and pollution of vegetation.

All of these items could be useful in creating an intelligence mosaic of a facility and its operations. This type of information can be valuable in filling in missing pieces of an intelligence picture that has been created from other sources. This is particularly important for U.S. industry because of the increased emphasis on economic intelligence collection by many countries.

Indoor Images

Thermal images from the infra-red sensors may reveal information on production activities and processes, as well as the level and scope of heat generating activities that are occurring inside of the plant. Oblique photography could image exposed objects through large open doors that could not be detected by overhead photography.

Government contractors who are working on classified, sensitive, or advanced technology programs should carefully assess the potential disclosure risks that may be posed by Open Skies overflights. All companies should determine whether proprietary information could be exposed. In doing so, one must remember that a skilled analyst will exploit the combination of all available imagery.

Self-Assessment

The Open Skies Treaty will provide many nations with their first opportunity to conduct aerial observations over the United States. A considerable amount of information could be collected which may not have been previously available to them, and which could increase their knowledge and understanding of your facility. Additionally, other Treaty members — who previously have had to rely on commercial satellite imagery such as SPOT from France — may purchase copies of the data from Open Skies flights. Although distribution to non-member states is prohibited by the Treaty, the possibility exists that the Open Skies data may also become available to nations that are not Treaty members.

The Impact

The Treaty is designed to guard against covert intelligence activity and



use of sensors with capabilities that exceed Treaty limits. U.S. sensor experts will inspect observation aircraft for permitted ground resolution on authorized sensors and for clandestine sensors. In addition, U.S. government escorts will be on observation aircraft to ensure that flight altitude restrictions associated with sensor resolution are adhered to and that the permitted sensors are properly used.

U.S. GOVERNMENT ASSISTANCE

DTIRP

The Defense Treaty Inspection Readiness Program (DTIRP) is a Department of Defense program designed to protect national security interests and critical technologies during arms control treaty activities such as Open Skies overflights. DTIRP is supported by subject matter experts and security and counterintelligence specialists from the National Security Agency, Central Intelligence Agency, Defense Intelligence Agency, Federal Bureau of Investigation, Defense Investigative Service, Defense Nuclear Agency,

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Defense Evaluation Support Activity, Defense Information Systems Agency, Arms Control Intelligence Staff, Department of Energy, various Military Services, and other Executive Branch agencies, as well as the On-Site Inspection Agency.

If requested, DTIRP will provide early warning notices to any facility that can be imaged during a specific Open Skies observation mission. Such notices normally consist of an initial 72-hour notice of intent to conduct an observation flight in the U.S.; notice to sites affected by the proposed flight route and the negotiated flight route; warning of imminent flight departure for the mission; cancellation or completion of the mission; and others as required. Upon receipt of a DTIRP notification, facilities can implement any protective measures that may be required.

DTIRP can provide you with more information on Open Skies overflights and notification. The On-Site Inspection Agency (OSIA) is DTIRP's Executive Agent, and OSIA's Security Office is the focal point for information and assistance. Contact the DTIRP Outreach Program at 1-800-419-2899.

Who To Call

Open Skies Treaty



NOTES

Open Skies Treaty



1-800-419-2899

**Attn: Security Office (SO)
On-Site Inspection Agency
201 West Service Road, Dulles IAP
P.O. Box 17498
Washington, D.C. 20041-0498**

Defense Treaty Inspection Readiness Program